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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,012	03/02/2004	Anne Flisher	GT/3-21923/A/AC/ 533/CONT	1286
324	7590	08/08/2005	EXAMINER	
CIBA SPECIALTY CHEMICALS CORPORATION PATENT DEPARTMENT 540 WHITE PLAINS RD P O BOX 2005 TARRYTOWN, NY 10591-9005			BERMAN, SUSAN W	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 08/08/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/791,012	<b>Applicant(s)</b> FLISHER ET AL.	
	<b>Examiner</b> Susan W. Berman	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 17, 18 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 17, 18 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/890129.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*MC*

*RB*

***Response to Amendment***

The objection to the amendment filed 01-2004 under 35 U.S.C. 132 is withdrawn.

The rejection of claims as being anticipated by Cywar et al is withdrawn in response to the amendments to claims 1 and 17 requiring that the polymer is not subjected to a comminuting step. See the rejection under 35 USC 112 set forth below.

***Response to Remarks***

Applicant's arguments for reconsideration filed 05/16/2005 have been considered but have been found unpersuasive.

Claims 1-11, 17, 18 and 21 are now rejected under 35 USC 103 as being unpatentable over Cywar et al. See below.

EP 0 290 84 in view of Cywar et al: Applicant argues that EP '814 is primarily concerned with formation of a composite while Cywar et al are concerned with preparation of a gelled comminuted polymer. It is agreed that Cywar et al teach comminuting the polymer to reduce the thickness of the gelled polymer. It is also agreed that EP '814 discloses composites wherein a fabric is coated and impregnated with the monomer solution to be polymerized. However, EP '814 teaches irradiating the composite from both sides, thus teaching irradiation of layers of aqueous monomer solution on the surfaces of the composite. In any case, the difference between the disclosure of EP '814 and the instant claims, as written, is that EP '814 does not disclose the presence of a UV initiator in the aqueous monomer solution that is not activated until step c in the claimed process. Cywar et al are relied upon for teaching that a UV initiator can be added to an aqueous monomer solution, remains in the formed polymer obtained by polymerization in the absence of light exposure and can be activated by exposing the polymer to light.

Applicant's arguments for reconsideration of the obviousness type double patenting rejection over A.N. 10/468191 in view of Cywar et al are unpersuasive for the following reasons. The difference between the claims of A.N. '191 and the instant claims is that the claims of AN '191 set forth a first and a

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second UV initiator and different irradiation intensities to be used to activate the first and second initiators in a two stage polymerization, while the instant claims set forth a UV initiator and subjecting a polymer formed in step b to irradiation in step c. The instant claims do not set forth any specific method steps for forming the polymer in step b except for requiring that the UV initiator is distributed throughout the polymer. Cywar et al is relied upon for teaching that a UV initiator can be present during formation of a polymer in an analogous polymerization process and then activated to reduce the level of residual monomer in the formed polymer. Thus Cywar et al teach that it would have been obvious to one skilled in the art at the time of the invention to omit the photoinitiator activated by irradiation to form a polymer in step b in the claims of A.N. '191 with a reasonable expectation of forming a polymer using redox or thermal initiators in the presence of a UV initiator and activating the UV initiator in a subsequent irradiation step.

### *Specification*

The disclosure is objected to because of the following informalities: There are no headings, i.e. Background of the Invention, Summary of the Invention, Brief Description of Drawings, etc..

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-11, 17, 18 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The added recitation wherein the ...polymer is not "subjected to a comminuting step" lacks support in the

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specification as filed. Applicant points to page 1, paragraph 3, for support in the specification for this amendment. However, this paragraph, which is the only mention of comminuting a polymer, is a discussion of the background of the invention and what is known in the prior art. The disclosure on page 7, paragraph 2, discusses alternative processes for preparing the polymers to be used in the instantly claimed process, i.e., solution polymerization, reverse phase polymerization and emulsion polymerization as alternative methods for polymerizing an aqueous solution of water soluble monomer. However, there is no mention or recognition that a comminuting step is to be omitted in any or all of the disclosed alternatives. It is suggested that applicant employ claim language that recites method steps in positive rather than negative terms, for example as is set forth in claim 21.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 17, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cywar et al (6,262,141). Cywar et al teach polymerizing vinyl monomers, including acrylamide, in aqueous solution comprising one or more photoinitiators wherein the photoinitiator is present during the initial polymerization that occurs by action of redox initiators or thermal decomposition of an azo compound (column 4, lines 46-63). The preferred ultraviolet photoinitiator is an  $\alpha$ -hydroxyacetophenone, such as Irgacure 2959 and Darocure 1173 (column 5, lines 23-35). The polymer is then irradiated to decompose the photoinitiator and polymerize any remaining monomer simultaneously with or after a step of comminuting the polymer. The polymer is irradiated with an intensity of 2-20 mW/cm<sup>2</sup>, such as 15 mW/cm<sup>2</sup> in the examples, during the period of drying. See column 4, lines 25-39 and lines 46-67, column

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5, lines 23-34, the “Gelled Polymer Synthesis” and Example 1. With respect to claim 5, the polymers disclosed by Cywar et al would be expected to have the instantly claimed intrinsic viscosity because the polymers produced are provided by the same monomers and method steps as are instantly claimed. With respect to claim 21, Cywar et al teach emulsion or suspension polymerization, as well as by solution polymerization, in column 5, lines 51-62.

Cywar et al teach that comminuting the polymer allows treatment without limiting the thickness of the polymer gel and that comminuting a thick section of gel followed by irradiation and drying the gel particles is “much more efficient in terms of residual monomer reduction” compared to irradiating a thick section of gel followed by comminuting and drying (column 6, line 66, to column 7, line 17). It would have been obvious to one skilled in the art at the time of the invention to omit the comminuting step in the method taught by Cywar et al for the following reasons. Cywar et al teach that the comminuting step is useful wherein a thick gel is being treated, thus one of ordinary skill in the art at the time of the invention would have been motivated to omit the comminuting step when treating a thin gel or a gel prepared with limited thickness. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of successfully reducing residual monomer, as taught by Cywar et al. Alternatively, one of ordinary skill in the art at the time of the invention would have been motivated to omit the comminuting step by a reasonable expectation of reducing residual monomer in a polymeric gel even though the degree of reduction of residual monomer might be less than that obtained when the polymer is comminuted.

Claims 1-11, 17-18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 290 814 in view of Cywar et al ‘141. EP ‘814 discloses the instantly claimed method except for adding an ultraviolet initiator to the monomer mixture. EP ‘814 teaches irradiating the composite from both sides, thus teaching irradiation of layers of aqueous monomer solution on the surfaces of the composite. The

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difference between the disclosure of EP '814 and the instant claims, as written, is that EP '814 does not disclose the presence of a UV initiator in the aqueous monomer solution that is not activated until step c in the claimed process.

Cywar et al, in analogous art, teach that vinyl monomers can be polymerized in aqueous solution by activation of redox or thermal initiators in the presence of an ultraviolet initiator. Cywar et al are relied upon for teaching that a UV initiator can be added to an aqueous monomer solution, remains in the formed polymer obtained by polymerization in the absence of light exposure and can be activated by exposing the polymer to light. See the discussion of the disclosure of Cywar et al above. It would have been obvious to one skilled in the art at the time of the invention to add an ultraviolet initiator to the monomer mix, in the method disclosed by EP '814 in order to take advantage of the initiating properties of the ultraviolet initiator during the subsequent step of irradiation with ultraviolet light, as taught by Cywar et al.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11, 17, 18 and 21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/468191 in view of Cywar et al (6,262,141). The claims of SN '191 recite process steps comprising forming an aqueous mixture including ultraviolet initiators and effecting polymerization by subjecting the

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mixture to irradiation at a specific light intensity and then subjecting the product to irradiation at a higher light intensity. The difference from the instantly claimed process is that the instantly claimed process sets forth a limitation that polymerization step b is conducted “substantially” in the absence of ultraviolet radiation although in the presence of a UV initiator in the mixture. However, step b in the process of SN ‘191 encompasses step b in the instantly claimed process wherein polymerization is effected by the polymerization conditions of irradiation within the limitation of being conducted “substantially” in the absence of ultra-violet radiation. Cywar et al teach polymerizing vinyl monomers, including acrylamide, in aqueous solution activated by the presence of redox initiators or a thermal initiator and in the presence of an ultraviolet photoinitiator and then irradiating the product with a light intensity of 2-20 mW/cm<sup>2</sup> during the period of drying. It would have been obvious to one skilled in the art at the time of the invention to add a redox or thermal initiator to an aqueous mixture of ethylenically unsaturated monomer and photoinitiator set forth in the claims of SN ‘191, as taught by Cywar et al in analogous art, in order to effect polymerization by a combination of chemical or thermal initiation and photoinitiation in the process step b claimed in SN ‘191. Cywar et al provide motivation by teaching that a step wherein a redox initiator or a thermal initiator is activated in the presence of an ultraviolet photoinitiator is suitable to polymerize the vinyl monomers in an aqueous mixture, followed by irradiating the product in a second step.

This is a provisional obviousness-type double patenting rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing



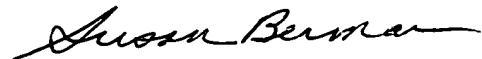
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date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan W Berman  
Primary Examiner  
Art Unit 1711

SB  
7/31/2005